

L Number	Hits	Search Text	DB	Time stamp
-	7	"5823758"	USPAT; US-PGPUB	2004/04/17 09:56
-	4	"2596450"	USPAT; US-PGPUB	2004/04/17 10:03
-	1852	hydrotreat\$ same distillate	USPAT; US-PGPUB	2004/04/17 10:08
-	515	vapor same phase same inhibitor	USPAT; US-PGPUB	2004/04/17 10:09
-	1	(hydrotreat\$ same distillate) and (vapor same phase same inhibitor)	USPAT; US-PGPUB	2004/04/17 10:04
-	52	(hydrotreat\$ same distillate) and 44/\$.ccls.	USPAT; US-PGPUB	2004/04/17 10:04
-	3	hydrotreat\$ and (vapor same phase same inhibitor)	USPAT; US-PGPUB	2004/04/17 10:08
-	307	vapor with phase with inhibitor	USPAT; US-PGPUB	2004/04/17 10:09
-	1	(hydrotreat\$ same distillate) and (vapor with phase with inhibitor)	USPAT; US-PGPUB	2004/04/17 10:09
-	363	hydrotreat\$ same distillate	EPO; JPO; DERWENT	2004/04/17 10:10
-	355	vapor with phase with inhibit\$	EPO; JPO; DERWENT	2004/04/17 10:10
-	1	(hydrotreat\$ same distillate) and (vapor with phase with inhibit\$)	EPO; JPO; DERWENT	2004/04/17 10:10
-	1	hydrotreat\$ and (vapor with phase with inhibit\$)	EPO; JPO; DERWENT	2004/04/17 10:10
-	42	hydrotreat\$ and amine	EPO; JPO; DERWENT	2004/04/17 10:11
-	128579	surfactant	EPO; JPO; DERWENT	2004/04/17 10:11
-	3	(hydrotreat\$ and amine) and surfactant	EPO; JPO; DERWENT	2004/04/17 10:14
-	3	(hydrotreat\$ same distillate) and surfactant	EPO; JPO; DERWENT	2004/04/17 10:15
-	701	petroleum with amine	EPO; JPO; DERWENT	2004/04/17 10:15
-	1	(vapor with phase with inhibitor) and ((petroleum with amine) and 44/\$.ccls.)	USPAT; US-PGPUB	2004/04/17 10:16
-	132	(petroleum with amine) and 44/\$.ccls.	USPAT; US-PGPUB	2004/04/17 10:20
-	46	((petroleum with amine) and 44/\$.ccls.) and (surfactant or emulsifier or "surface active")	USPAT; US-PGPUB	2004/04/17 10:21

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 JAN 27 Source of Registration (SR) information in REGISTRY updated
 and searchable
NEWS 4 JAN 27 A new search aid, the Company Name Thesaurus, available in
 CA/CAPLUS
NEWS 5 FEB 05 German (DE) application and patent publication number format
 changes
NEWS 6 MAR 03 MEDLINE and LMEADLINE reloaded
NEWS 7 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 8 MAR 03 FRANCEPAT now available on STN
NEWS 9 MAR 29 Pharmaceutical Substances (PS) now available on STN
NEWS 10 MAR 29 WPIFV now available on STN
NEWS 11 MAR 29 No connect hour charges in WPIFV until May 1, 2004
NEWS 12 MAR 29 New monthly current-awareness alert (SDI) frequency in RAPRA

NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
 MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
 AND CURRENT DISCOVER FILE IS DATED 13 APRIL 2004
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 09:47:31 ON 17 APR 2004

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 09:48:12 ON 17 APR 2004

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FILE COVERS 1907 - 17 Apr 2004 VOL 140 ISS 17

FILE LAST UPDATED: 16 Apr 2004 (20040416/ED)

h eb c g cg b cg

eb

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s hydrotreat? (p) distillate

8077 HYDROTREAT?
39871 DISTILLATE
14000 DISTILLATES
48070 DISTILLATE
(DISTILLATE OR DISTILLATES)

L1 919 HYDROTREAT? (P) DISTILLATE

=> s aromatic or hydrocarbon

214025 AROMATIC
9363 AROMATICS
218325 AROMATIC
(AROMATIC OR AROMATICS)
279182 AROM
14249 AROMS
286609 AROM
(AROM OR AROMS)
405448 AROMATIC
(AROMATIC OR AROM)
306184 HYDROCARBON
305126 HYDROCARBONS
470465 HYDROCARBON
(HYDROCARBON OR HYDROCARBONS)

L2 758652 AROMATIC OR HYDROCARBON

=> s vapor (P) phase (P) inhibitor

457272 VAPOR
68150 VAPORS
497663 VAPOR
(VAPOR OR VAPORS)
1485014 PHASE
315735 PHASES
1618967 PHASE
(PHASE OR PHASES)
439104 INHIBITOR
459830 INHIBITORS
708465 INHIBITOR
(INHIBITOR OR INHIBITORS)

L3 611 VAPOR (P) PHASE (P) INHIBITOR

=> s surfactant or emulsifier or surface active

158103 SURFACTANT
141852 SURFACTANTS
200300 SURFACTANT
(SURFACTANT OR SURFACTANTS)
29729 EMULSIFIER
18128 EMULSIFIERS
37896 EMULSIFIER
(EMULSIFIER OR EMULSIFIERS)
1923294 SURFACE
374304 SURFACES
2076750 SURFACE
(SURFACE OR SURFACES)
820500 ACTIVE
684 ACTIVES
820888 ACTIVE
(ACTIVE OR ACTIVES)
30322 SURFACE ACTIVE
(SURFACE(W)ACTIVE)

L4 249570 SURFACTANT OR EMULSIFIER OR SURFACE ACTIVE

h eb c g cg b cg

eb

=> s 11 and 12 and 13 and 14

L5 1 L1 AND L2 AND L3 AND L4

=> d 15 ti

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

**Citing
References**

TI **hydrotreated distillates-amines-surfactants** as additive packages for hydrocarbon fuels

=> d 15 all

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

**Full
Text** **Citing
References**

AN 2002:964703 CAPLUS

DN 138:41836

ED Entered STN: 20 Dec 2002

TI **hydrotreated distillates-amines-surfactants** as additive packages for hydrocarbon fuels

IN Lack, Lloyd R.

PA USA

SO U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO

DT Patent

LA English

IC ICM C10L001-10

NCL 044310000

CC 51-11 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002189156	A1	20021219	US 2002-75506	20020213
PRAI	US 2001-288812P	P	20010504		

AB **Hydrocarbon** fuels (e.g., based on propane and LPG) are composed of a 60-76 vol.% of a **hydrocarbon** mixt., 10-16 vol.% of a **hydrotreated distillate**, a **vapor-phase inhibitor** (increasing additive), and an anionic or an ionic **surfactant**. Suitable additives include petroleum-derived amines and **arom. hydrocarbons**. The additives function as combustion improvers.

ST **hydrocarbon** fuel additive **hydrotreated distillate surfactant**; **vapor phase inhibitor hydrocarbon** fuel combustion improver; propane fuel additive **hydrotreated distillate** amine; LPG fuel additive **hydrotreated distillate** amine

IT **Surfactants**
(anionic; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Fuel additives
(combustion improvers; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Petroleum products
(**distillates, hydrotreated; hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Petroleum products
(gases, liquefied; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT **Aromatic hydrocarbons**, uses

h e b c g c g b c g

eb

RL: MOA (Modifier or additive use); USES (Uses)
 (**hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT **Surfactants**
 (ionic; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT Amines, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (petroleum-derived; **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

IT 74-98-6, LPG, uses 106-97-8, LPG, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels)

=> s petroleum (p) amine
 274409 PETROLEUM
 5959 PETROLEUMS
 274776 PETROLEUM
 (PETROLEUM OR PETROLEUMS)
 243949 AMINE
 232951 AMINES
 375118 AMINE
 (AMINE OR AMINES)
 L6 3525 PETROLEUM (P) AMINE

=> s 16 and 11
 L7 2 L6 AND L1

=> d 17 1-2 ti

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Citing References

TI **hydrotreated distillates-amines-surfactants** as additive packages for **hydrocarbon** fuels

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Citing References

TI Behavior of nitrogen compounds during hydrotreating of Khafji atmospheric residuum

=> s 16 and fuel
 330802 FUEL
 152588 FUELS
 379049 FUEL
 (FUEL OR FUELS)
 L8 339 L6 AND FUEL

=> s 18 and LPG
 3663 LPG
 52 LPGS
 3686 LPG
 (LPG OR LPGS)
 L9 6 L8 AND LPG

=> d 19 1-6 all

h eb c g cg b cg

eb

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2002:964703 CAPLUS
 DN 138:41836
 ED Entered STN: 20 Dec 2002
 TI hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**
 IN Lack, Lloyd R.
 PA USA
 SO U.S. Pat. Appl. Publ., 3 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C10L001-10
 NCL 044310000
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002189156	A1	20021219	US 2002-75506	20020213
PRAI	US 2001-288812P	P	20010504		

AB Hydrocarbon **fuels** (e.g., based on propane and **LPG**) are composed of a 60-76 vol.% of a hydrocarbon mixt., 10-16 vol.% of a hydrotreated distillate, a vapor-phase inhibitor (increasing additive), and an anionic or an ionic surfactant. Suitable additives include **petroleum**-derived **amines** and arom. hydrocarbons. The additives function as combustion improvers.

ST hydrocarbon **fuel** additive hydrotreated distillate surfactant; vapor phase inhibitor hydrocarbon **fuel** combustion improver; propane **fuel** additive hydrotreated distillate amine; **LPG fuel** additive hydrotreated distillate amine

IT Surfactants
 (anionic; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Fuel** additives
 (combustion improvers; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Petroleum** products
 (distillates, hydrotreated; hydrotreated distillates-**amines** -surfactants as additive packages for hydrocarbon **fuels**)

IT **Petroleum** products
 (gases, liquefied; hydrotreated distillates-**amines** -surfactants as additive packages for hydrocarbon **fuels**)

IT Aromatic hydrocarbons, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT Surfactants
 (ionic; hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

IT **Amines**, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**petroleum**-derived; hydrotreated distillates-**amines** -surfactants as additive packages for hydrocarbon **fuels**)

IT 74-98-6, **LPG**, uses 106-97-8, **LPG**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon **fuels**)

L9 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2001:265300 CAPLUS
 DN 134:283155
 ED Entered STN: 13 Apr 2001
 TI Removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines
 IN Wagner, Rupert; Hugo, Randolph; Holst, Thomas S.
 PA BASF A.-G., Germany
 SO PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM B01D053-14
 ICS C10L003-10; B01D011-04
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 48
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001024912	A1	20010412	WO 2000-EP9704	20001004
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 19947845	A1	20010412	DE 1999-19947845	19991005
	EP 1227873	A1	20020807	EP 2000-979483	20001004
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	NO 2002001590	A	20020531	NO 2002-1590	20020404
PRAI	DE 1999-19947845	A	19991005		
	WO 2000-EP9704	W	20001004		

AB A scrubbing method for removal of COS and addnl. acid gases (e.g., CO₂, H₂S, mercaptans, etc.) from a hydrocarbon-contg. stream consists of scrubbing with an aq. soln. (1.5-5 M) of a C₂-12-aliph. alkanolamine and 0.4-1.7 M of a primary or secondary amine activator. The amine activator can be a 5- or 6-membered nitrogen heterocycle, optionally contg. oxygen. Suitable alkanolamines include methyldiethanolamine and triethanolamine; suitable activators include ethanolamine, methylethanolamine, diethanolamine, piperazine, methylpiperazine, and morpholine. The method is suited for scrubbing of natural gas, synthesis gas (esp. prepd. from heavy oil or residues), LPG, or natural gas liqs.

ST carbonyl sulfide removal alkanolamine scrubbing; hydrogen sulfide removal alkanolamine scrubbing; acid gas removal **fuel** gas scrubbing; **fuel** gas alkanolamine scrubbing; heterocyclic amine alkanolamine **fuel** gas scrubbing

IT Alcohols, uses
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (amino, C₂-12, scrubbing solvents; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT Scrubbing
 (aq.; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT **Petroleum** products
 RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
 (gases, liquefied, scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic **amines**)

IT Heterocyclic compounds

- RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(nitrogen, five-membered, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Heterocyclic compounds
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(nitrogen, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Heterocyclic compounds
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(nitrogen-oxygen, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Natural gas, preparation
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
(processing, scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Thiols (organic), processes
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Synthesis gas
(scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Natural gas condensates
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
(scrubbing of; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT **Petroleum** refining
(scrubbing, of **fuel** gases; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic **amines**)
- IT Amines, uses
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(secondary, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT Amines, uses
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(tertiary, scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT 124-38-9, Carbon dioxide, processes 463-58-1, Carbonyl sulfide 7783-06-4, Hydrogen sulfide, processes
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)
- IT 109-83-1, Monomethylethanolamine 110-85-0, Piperazine, uses 110-91-8, Morpholine, uses 111-42-2, Diethanolamine, uses 141-43-5, Monoethanolamine, uses 27323-66-6, Piperazine, methyl-
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical

process); PROC (Process); USES (Uses)

(scrubbing activators; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

IT 102-71-6, Triethanolamine, uses 105-59-9, Methyldiethanolamine
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(scrubbing solvents; removal of carbonyl sulfide and acid gases from hydrocarbon fluids by scrubbing with alkanolamines and heterocyclic amines)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Appl; US 4336233 A 1982 CAPLUS

(2) Gerhardt; US 4999031 A 1991 CAPLUS

(3) Peytavy; US 5348714 A 1994 CAPLUS

(4) Union Carbide Chemicals & Plastics Technology Corporation; WO 0066249 A
2000 CAPLUS

L9 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1997:686130 CAPLUS

DN 127:320568

ED Entered STN: 30 Oct 1997

TI Treat **LPGs** with amines

AU Nielsen, R. B.; Rogers, J.; Bullin, J. A.; Duewall, K. J.

CS Fluor Daniel, Inc., Irvine, CA, USA

SO Hydrocarbon Processing, International Edition (1997), 76(9), 49-50, 53-54, 56, 58-59

CODEN: IHPRBS; ISSN: 0018-8190

PB Gulf Publishing

DT Journal; General Review

LA English

CC 51-0 (Fossil Fuels, Derivatives, and Related Products)

AB A review, with 26 refs., of the fundamental aspects of **LPG** amine treaters and guidelines, design considerations and alternatives for static mixers, jet eductor mixers and columns with structured packing, random packing and sieve trays. All of these current design methods are compared based on plant operating data.

ST **LPG** sweetening amine review

IT Packing materials (beds)

Sweetening agents

(**LPG** sweetening with amines)

IT Amines, uses

RL: NUU (Other use, unclassified); USES (Uses)

(**LPG** sweetening with amines)

IT **Petroleum** products

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(gases, liquefied; **LPG** sweetening with **amines**)

IT Plates

(sieve; **LPG** sweetening with amines)

IT Mixers (processing apparatus)

(static; **LPG** sweetening with amines)

IT **Fuel** gas manufacturing

(sweetening in; **LPG** sweetening with amines)

IT 105-59-9 111-42-2, Diethanolamine, uses 141-43-5, uses 929-06-6, Diglycolamine

RL: NUU (Other use, unclassified); USES (Uses)

(**LPG** sweetening with amines)

IT 124-38-9, Carbon dioxide, processes 463-58-1, Carbonyl sulfide
7783-06-4, Hydrogen sulfide, processes

RL: REM (Removal or disposal); PROC (Process)

(**LPG** sweetening with amines)

L9 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1990:518258 CAPLUS
 DN 113:118258
 ED Entered STN: 29 Sep 1990
 TI Removal of organic sulfur compounds from gases
 IN Nakajima, Susumu; Wakitani, Yoshiaki
 PA Kawasaki Steel Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B01D053-14
 ICS B01D053-34; C10G019-02; C10G053-02
 CC 51-9 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02014714	A2	19900118	JP 1988-163631	19880630
	JP 07090139	B4	19951004		
PRAI	JP 1988-163631		19880630		
AB	A dry-type method for removing org. S compds., esp. COS and CS ₂ , from coke-oven gas, LPG , blast-furnace gas or flue gases, etc., comprises (a) contacting the feed gas with a 1st adsorbent contg. secondary amines (e.g., diethanolamine or diphenylamine) in a 1st stage to remove most CS ₂ and to decomp. the remaining CS, (b) contacting the treated gas with a 2nd adsorbent contg. diglycolamine in a 2nd stage to remove the formed H ₂ S from the COS decompn., and (c) passing the treated gas through a fixed bed of catalysts contg. Fe oxide in a 3rd stage to completely remove residual H ₂ S.				
ST	coke oven gas desulfurization adsorbent; diethanolamine adsorbent carbon disulfide removal; carbonyl sulfide removal flue gas				
IT	Petroleum gases, liquefied RL: USES (Uses) (org. sulfur compd. removal from, adsorbents contg. secondary amines for)				
IT	Fuel gases (coke-oven, org. sulfur compd. removal from, adsorbents contg. secondary amines for)				
IT	Flue gases (industrial, org. sulfur compd. removal from, adsorbents contg. secondary amines for)				
IT	Amines, uses and miscellaneous RL: USES (Uses) (secondary, adsorbents contg., for removing carbon disulfide from coke-oven or flue gases)				
IT	<u>111-42-2</u> , uses and miscellaneous RL: USES (Uses) (adsorbent contg., on calcium silicate supports, for removing carbon disulfide from coke-oven or flue gases)				
IT	<u>929-06-6</u> RL: USES (Uses) (adsorbent contg., on iron oxide supports, for removing org. sulfur compds. from coke-oven or flue gases)				
IT	<u>1332-37-2</u> , Iron oxide, uses and miscellaneous RL: CAT (Catalyst use); USES (Uses) (catalysts contg., for removing hydrogen sulfide, in gas purifn.)				
IT	<u>463-58-1</u> , Carbonyl sulfide RL: RCT (Reactant); RACT (Reactant or reagent) (decompn. of, hydrogen sulfide from, removal of, diglycolamine-contg. adsorbent for)				
IT	<u>7783-06-4P</u> , Hydrogen sulfide (H ₂ S), uses and miscellaneous				

h e b c g c g b c g

e b

RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, from carbonyl sulfide decompn., in removal of org.
 sulfur compds. from coke-oven or flue gases)

IT 63143-57-7, Carbon sulfide

RL: REM (Removal or disposal); PROC (Process)
 (removal of, from coke-oven gas or flue gases, adsorbents for)

L9 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
-----------	-------------------

AN 1982:408769 CAPLUS

DN 97:8769

ED Entered STN: 12 May 1984

TI New low-investment process to recover liquids from refinery **fuel** gas being used in Texas

AU Rowell, Rex L.

CS PCI Consult. Inc., Houston, TX, USA

SO Oil & Gas Journal (1982), 80(19), 127-31

CODEN: OIGJAV; ISSN: 0030-1388

DT Journal

LA English

CC 51-9 (Fossil Fuels, Derivatives, and Related Products)

AB Hydrocarbon liqs. are recovered and gas streams are sepd. from **petroleum**-cracking and catalytic-reforming off-gases in a multistep cryogenic process. **Amine**-scrubbed gases are expanded with partial condensation (exit temps. -150° to -200°F and dried. The final step is demethanization (or deethanization), in which **LPG** and gasoline liqs. are sepd. for further fractionation from C1 and C2 fractions. The process is further characterized by low capital investment and short payout periods. Material balances for various phases of operation are also given.

ST petroleum refinery gas sepn; refinery gas sepn cryogenic; **LPG** cryogenic recovery refinery gas; gasoline cryogenic recovery refinery gas

IT Gasoline

Petroleum gases, liquefied

RL: PROC (Process)

(recovery of, from cracking and catalytic-reforming off-gases, cryogenic process for)

IT Petroleum refining

(gas-liq. sepn., of cracking and catalytic-reforming off-gases, cryogenic process for)

IT Petrochemicals

(light olefins, recovery of, from cracking and catalytic-reforming off-gases, cryogenic process for)

L9 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1972:517808 CAPLUS

DN 77:117808

ED Entered STN: 12 May 1984

TI Control of vehicular air pollution through modifications to conventional power plants and their **fuels**

AU Quick, Stephen L.; Kittredge, George D.

CS Natl. Air Pollut. Control Adm., Ann Arbor, MI, USA

SO Proc. Int. Clean Air Congr., 2nd (1971), Meeting Date 1970, 631-9.

Editor(s): Englund, H. M. Publisher: Academic, New York, N. Y.

CODEN: 25JQAO

DT Conference

LA English

CC 59-2 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 51, 67

AB Investigations carried out by the Natl. Air Pollution Control Adm. (NAPCA) are reviewed. Two control techniques are considered, viz., those based on

(1) engine modification and (2) **fuel** modification. The former approach includes removal of gaseous pollutant emissions from the exhaust system, provides induction system improvement designed to permit better atomization, and removal of particulates from the exhaust stream. Fe-base alloys and a nonmetallic reactor development program are expected to yield economical high-temp. reactors. Catalytic control devices esp. for N oxides are studied with rare earth metal oxides as the significant catalysts. Atomization devices producing 10-20- μ droplets are most promising in achieving improved distribution of the **fuel**-air mixt. A spinning disk atomizer operating at 45,000 rpm produces 20- μ droplets with a 2-in. diam. disk. The high speed is achieved with either an elec. motor or an air turbine. Alternate **fuels** for emission control include liquefied **petroleum** gas (LPG), liquefied and compressed natural gas (LNG and CNG), alcs., ethers, NH₃, **amines**, and hydrazines. LNG and CNG are advantageous owing to the clean burning characteristics of gaseous **fuels**, NAPCA does not recommend dual **fuel** systems. Other promising **fuels** are MeOH and H.

ST vehicular air pollution control; catalyst vehicular air pollution;
petroleum gas vehicular **fuel**; natural gas vehicular **fuel**; alc
vehicular **fuel**; ether vehicular **fuel**; ammonia vehicular **fuel**;
amine vehicular **fuel**; hydrazine vehicular **fuel**; methanol vehicular
fuel; hydrogen vehicular **fuel**

IT **Fuels**
(air pollution control in relation to vehicular)

IT Engines
(design of, air pollution in relation to)

IT Exhaust gases
(treatment of)

=> d his

(FILE 'HOME' ENTERED AT 09:47:31 ON 17 APR 2004)

FILE 'CAPLUS' ENTERED AT 09:48:12 ON 17 APR 2004

L1 919 S HYDROTREAT? (P) DISTILLATE
L2 758652 S AROMATIC OR HYDROCARBON
L3 611 S VAPOR (P) PHASE (P) INHIBITOR
L4 249570 S SURFACTANT OR EMULSIFIER OR SURFACE ACTIVE
L5 1 S L1 AND L2 AND L3 AND L4
L6 3525 S PETROLEUM (P) AMINE
L7 2 S L6 AND L1
L8 339 S L6 AND FUEL
L9 6 S L8 AND LPG

=> s l1 and l6

L10 2 L1 AND L6

=> s l6 and l3

L11 3 L6 AND L3

=> d l11 1-3 ti

L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

**Citing
References**

TI hydrotreated distillates-amines-surfactants as additive packages for hydrocarbon fuels

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

**Citing
References**

TI Organic nitrogen compounds as corrosion inhibitors for crude oil processing

h eb c g cg b cg

eb

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Citing References

TI Organic coatings with a **vapor-phase** corrosion inhibitor

=> d 111 2 3 all

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1969:13219 CAPLUS

DN 70:13219

ED Entered STN: 12 May 1984

TI Organic nitrogen compounds as corrosion inhibitors for crude oil processing

AU Wingerter, K. H.; Becker, F. J.

CS Komb. "Otto Grotewohl", Boehlen, Ger. Dem. Rep.

SO Conf. Chem. Chem. Process. Petrol. Natur. Gas, Plenary Lect., Budapest (1968), Meeting Date 1965, 959-66. Editor(s): Freund, Michael. Publisher: Akad. Kiado, Budapest, Hung.

CODEN: 20GJAN

DT Conference

LA German

CC 51 (Petroleum, Petroleum Derivatives, and Related Products)

AB A discussion was presented of the protection by N-contg. **inhibitors** of overhead **petroleum** distn. equipment against corrosion by chlorides, naphthenic acids, and S compds. Com. **inhibitors** such as Conrad R, Kontol, Nalco 161 AC, and synthesized compds. such as alkylamines, fatty **amines**, ethanolamine, ethylenediamine, morpholine, trialkyltriazines, alkylimidazolines, dicyclohexylamine, pyridine, quinoline, and aromatic **amines**, were tested in liq. (oil and water) and **vapor phase** by static and dynamic tests. The effect of HCl and H₂S at different temps. on metal strips was detd. C14-18 fatty **amines** offered the best results (~65% redn.).

ST corrosion inhibitors **petroleum**; fatty **amines** corrosion inhibitorsIT **Amines**, uses and miscellaneous

RL: USES (Uses)

(as corrosion inhibitors in **petroleum** refining)

IT Petroleum refining

(corrosion inhibitors for, nitrogen compds. as)

IT Nitrogen

RL: USES (Uses)

(as corrosion inhibitors in petroleum refining)

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1952:56012 CAPLUS

DN 46:56012

OREF 46:9324f-h

ED Entered STN: 22 Apr 2001

TI Organic coatings with a **vapor-phase** corrosion inhibitor

IN Wachter, Aaron; Stillman, Nathan

PA Shell Development Co.

DT Patent

LA Unavailable

CC 26 (Paints, Varnishes, and Lacquers)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2596450 19520513 US

AB Strippable and nonstrippable, mainly transparent, org. coatings are

h

eb c

g cg b

cg

eb

inhibited against the corrosion of ferrous and nonferrous metals with N-base nitrite salt **vapor-phase corrosion inhibitors**. Only dicycloalkyl **amine** nitrites are claimed, dicyclohexylamine nitrite in particular, by using 2-20 parts by wt. of **inhibitor** to 100 parts by wt. of coating material. The possible use of many more similar compds. is mentioned in which the nitrite salt of a primary, secondary, or tertiary **amine** is formed. Derivs. of quaternary ammonium bases including pyridinium bases are also given. The importance of a pH not lower than 6 in the inhibited coating is emphasized. The base coatings are mainly alkyl resin or ethylcellulose coats, hut the possible use of others, such as waxes, lacquers, paint bases with and without pigments, and asphalt emulsions, is also mentioned. The use of solvents, such as EtOH, amyl acetate, benzene, and **petroleum** naphtha, is given in the examples.

IT Nitrites
(corrosion-inhibiting org.)

IT Coating(s)
(corrosion-preventing or -resistant, from alkyd resins or ethylcellulose, contg. dicycloalkyl amine nitrites or quaternary ammonium bases as inhibitors)

IT Amines
(nitrites, corrosion inhibitors from)

IT Corrosion
(prevention of, dicycloalkyl amine nitrites and derivs. of quaternary ammonium bases for)

IT Piperidine, 2,2,6,6-tetramethyl-, nitrite
(corrosion inhibition by)

IT 9004-57-3, Cellulose, ethyl ether
(coatings from, contg. dicycloalkyl amine and quaternary ammonium compds. as corrosion inhibitors)

IT 14798-03-9, Ammonium
(compds., substituted, coatings contg. vapor-phase corrosion-inhibiting)

IT 3129-91-7, Dicyclohexylamine, nitrite
(corrosion-prevention compns. contg.)

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	ENTRY	SESSION
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	ENTRY	SESSION
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